

**REAMRKS**

The Examiner withdrew the Final Office Action mailed on July 26, 2005, which indicated allowable subject matter limitations. Since the Examiner has now discovered new references, the previous allowable subject matter limitations were regarded moot.

In the currently outstanding Office Action, the Examiner has rejected claims 1 through 5, 12 through 18, 24 through 28, 33 and 34 under 35 U.S.C. §102(a). In addition, the Examiner has rejected claims 1 through 30 and 33 through 36 under 35 U.S.C. §103(a). In view of the above amendments and the following remarks, the Applicants respectfully request the Examiner to reconsider the pending rejections.

**The Section 102 Rejections**

The Examiner has rejected claims 1 through 5, 12 through 18, 24 through 28, 33 and 34 under 35 U.S.C. §102(a) as allegedly being anticipated by the Kosaka reference. In response to the Examiner's allegation that the every subject matter of claim 1 has been anticipated by the above cited reference, independent claims 1 and 14 have been amended.

Newly amended independent method claim 1 now explicitly recites three additional steps and the amended adjusting step. The new steps include additionally "monitoring at a second unit a second average value of a total optical strength level .... of a received wave division multiplexed optical signal from the first unit;" "monitoring at the second unit a second probe optical strength level .... of the received wave division multiplexed optical signal from the first unit" and "transmitting the second average value ... and the second probe optical strength level from the second unit to the first unit." The "adjusting" step has been amended to explicitly recite "a sum of the first average value and the second average value of the total optical strength level

is substantially matched with a sum of the first probe optical strength level and the second probe optical strength level.”

Similarly, newly amended independent system claim 14 now explicitly recites three additional monitors and the amended adjustment unit. The new “third monitor” is “monitoring a second average value of a total optical strength level .... of the received wave division multiplexed optical signal from the first unit” while the new “fourth monitor” is “monitoring a second probe optical strength level .... of the received wave division multiplexed optical signal from the first unit.” Furthermore, “the second unit sends the second average value ... and the second probe optical strength level to the first unit.” The “adjustment unit” has been amended to explicitly recite that “the amplification characteristic” is adjusted “so that a sum of the first average value and the second average value of the total optical strength level substantially matches a sum of the first probe optical strength level and the second probe optical strength level.”

The Kosaka reference discloses an optical amplifier apparatus as illustrated in Figures 4 and 5 including an amplifier 12, an optical splitter, optical detectors 14a, 14b, a first controller 16, a second controller 18 and an optical adjuster 11. The first controller 16 controls the optical amplifier 12 based upon a difference between a predetermined reference value signal and the total optical power from the first optical detector 14b. On the other hand, the second controller 18 controls the optical adjuster 11 based upon a difference between an averaged optical power signal and the optical power of a specific wavelength from the second optical detector 14a.

In sharp contrast, newly amended independent claims 1 and 14 both call for two pairs of monitoring steps or units between the first and second units. A second pair of the “average value” and the “probe optical strength level” is monitored at “the second unit” and sent to “the first unit” for making adjustment in a such manner that “a sum of the first average value and the second average value of the total optical strength level is substantially matched with a sum of the first probe optical strength level and the second probe optical strength level.” In other words, the

Kosaka reference fails to disclose the above newly added subject matter limitations of the two sets of the “average values” and the “probe optical strength levels” to be used for adjustment as explicitly recited in independent claims 1 and 14.

Based upon the above discussed features, the Applicants respectfully submit that the newly amended independent claims 1 and 14 are patentably distinct over the Kosaka reference. Furthermore, dependent claims 2 through 5, 12 through 13, 15 through 18, 24 through 28, 33 and 34 ultimately depend from independent claims 1 and 14 and incorporate the above patentable features. Therefore, the Applicants respectfully submit to the Examiner that the rejections of claims 1 through 5, 12 through 18, 24 through 28, 33 and 34 under 35 U.S.C. §102(a) should be withdrawn.

#### The Section 103 Rejections

The Examiner has rejected claims 1 through 5, 12 through 18, 24 through 28, 33 and 34 under 35 U.S.C. §103(a) as allegedly being obvious over the Irie reference in view of Sugata. Furthermore, the Examiner has rejected claims 6 through 11 and 19 through 23 under 35 U.S.C. §103(a) as allegedly being obvious over the Irie reference in view of Sugata and further in view of the Kobayashi et al. reference. Lastly, the Examiner has rejected claims 29, 30, 35 and 36 under 35 U.S.C. §103(a) as allegedly being obvious over the Irie reference in view of Sugata and further in view of the Lagerstrom et al. reference. The Examiner alleges that the Irie reference discloses every subject matter of independent claims 1 and 14 except for monitoring an average value of a total optical strength level so that amplification is adjusted. For the lack of the above disclosure, the Examiner has cited the Sugata reference.

As discussed with respect to the above section 102 rejections, newly amended independent method claim 1 now explicitly recites three additional steps and the amended adjusting step. The new steps include additionally “monitoring at a second unit a second average

value of a total optical strength level .... of a received wave division multiplexed optical signal from the first unit;” “monitoring at the second unit a second probe optical strength level .... of the received wave division multiplexed optical signal from the first unit” and “transmitting the second average value ... and the second probe optical strength level from the second unit to the first unit.” The “adjusting” step has been amended to explicitly recite “a sum of the first average value and the second average value of the total optical strength level is substantially matched with a sum of the first probe optical strength level and the second probe optical strength level.”

Similarly, newly amended independent system claim 14 now explicitly recites three additional monitors and the amended adjustment unit. The new “third monitor” is “monitoring a second average value of a total optical strength level .... of the received wave division multiplexed optical signal from the first unit” while the new “fourth monitor” is “monitoring a second probe optical strength level .... of the received wave division multiplexed optical signal from the first unit.” Furthermore, “the second unit sends the second average value ... and the second probe optical strength level to the first unit.” The “adjustment unit” has been amended to explicitly recite that “the amplification characteristic” is adjusted “so that a sum of the first average value and the second average value of the total optical strength level substantially matches a sum of the first probe optical strength level and the second probe optical strength level.”

In sharp contrast, neither of the cited references alone or in combination fails to disclose, teach or suggest the above patentable features of newly amended independent claims 1 and 14. For example, the newly amended independent claims both explicitly recite that the adjustment is made in a manner “that a sum of the first average value and the second average value of the total optical strength level is substantially matched with a sum of the first probe optical strength level and the second probe optical strength level.” Although the cited references disclose certain feedback features, neither references remotely suggests the above specific patentable feature in adjustment.

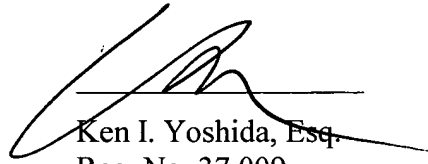
Based upon the above discussed features, the Applicants respectfully submit that the newly amended independent claims 1 and 14 are patentably distinct over the Irie reference in view of the Sugata reference. Furthermore, dependent claims 2 through 5, 12 through 13, 15 through 18, 24 through 28, 33 and 34 ultimately depend from independent claims 1 and 14 and incorporate the above patentable features. Thus, it would not have been obvious to one of ordinary skill to prove the invention as explicitly recited in newly amended independent claims 1 and 14 based upon the cited references alone or in combination. Therefore, the Applicants respectfully submit to the Examiner that the rejections of claims 1 through 5, 12 through 18, 24 through 28, 33 and 34 under 35 U.S.C. §103(a) should be withdrawn.

For the same reasons, dependent claims 6 through 11, 19 through 23, 29, 30, 35 and 36 ultimately depend from independent claims 1 and 14 and incorporate the above patentable features. However, claims 6 and 19 have been cancelled in the current amendment. As discussed above, it would not have been obvious to one of ordinary skill to prove the invention as explicitly recited in newly amended independent claims 1 and 14 based upon the cited references alone or in combination. Therefore, the Applicants respectfully submit to the Examiner that the rejections of claims 6 through 11, 19 through 23, 29, 30, 35 and 36 under 35 U.S.C. §103(a) should be withdrawn.

**Conclusion**

In view of the above amendments and the foregoing remarks, Applicant respectfully submits that all of the pending claims are in condition for allowance and respectfully request a favorable Office Action so indicating.

Respectfully submitted,



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